# DEPARTMENT OF HEALTH

#### **State Public Health Response to 2015 HPAI Outbreak**

Joni Scheftel DVM, MPH, DACVPM State Public Health Veterinarian

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#### **Poultry production in Minnesota**

- MN ranked #1 in turkey production and processing in the U.S.
  - 600 turkey farms
  - 40-42 million meat turkeys annually
  - MN breeder flocks supply the nation with turkey poults
- MN ranked #13 in egg production
  - 10 million layers
- MN ranked #19 in broiler production
  - 300 broiler chicken farms
  - 58 million broilers annually





## HPAI H5N2 in Minnesota, 2015

- First detection 3/4/2015
- 104 premises affected, plus six epi-linked premises

HPAI H5N2-Infected Poultry Flocks in Minnesota by Week of Onset of Increased Mortality, 2015 (n=104) 26 25 24 23 22 23 counties 21 20 19 Over 9 million birds died or were 18 17 depopulated 16 umber of Flocks 379 poultry workers monitored in 104 flocks Estimated losses \$310-490 million in Greater Minnesota, up to 1900 jobs impacted (UMN Extension 6/23/2015) 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 08 09 10 11 12 13 14 15 16 Week of Onset of Increased Mortality FEB



- 75 commercial turkey growers
- 23 breeder turkey facilities
- 4 table egg layer facilities
- 1 chicken pullet grower
- 1 backyard chicken and duck flock

#### Role of Minnesota Department of Health (MDH)

- Protect human health
- Support other responding agencies
- Monitor the health of people in direct contact with infected birds
- Provide guidance on infection control and use of PPE for producers, poultry personnel and responders
- Serve as a source of information for the industry and the public
- Provide public health perspective on the Board of Animal Health Avian Influenza Emergency Disease Management Committee



# What did we know about this high path H5N2 virus at the time?

- Descendant of the Asian lineage
  H5 that is known to infect people
- North American/Eurasian reassortant
- No molecular markers associated with increased virulence and transmission in mammals
- No molecular markers associated with NA inhibitor resistance
- Many opportunities for disease transmission reported from western states, yet no cases reported



#### MDH actions and responsibilities

- Recommended human seasonal influenza vaccination and provided recommendations for PPE
- Interviewed poultry workers for work duties, flock contact, PPE usage, and illness history
- Assessed exposure based on contact and PPE usage
- Recommended antivirals based on exposure and risk of severe disease with influenza
- Initiated active surveillance for respiratory symptoms in people exposed to test-positive poultry premises – "Monitoring"
- Coordinated testing for symptomatic poultry workers
  - Joint effort with MDH Influenza Unit

### Poultry worker monitoring

- Flock managers were expected to provide employee contact information
  - Participation by individual poultry workers was voluntary
- Exposure defined as any contact with birds or entering any barn on a test-positive premises
- Exposed persons were contacted for 10 days to detect onset of symptoms compatible with avian influenza
  - Infected barns Every day for 10 days
  - Healthy barns Days 0, 5 and 10
- Initial interview by phone. Subsequent monitoring was conducted via preferred method: phone, text, email
  - 55% of poultry personnel preferred texting

### **MDH** monitoring experience

- 104 flocks: interviewed, evaluated, and monitored
- 379 (86%) of 439 poultry workers interviewed and monitored
  - 198 (53%) of 379 recommended oseltamivir
    - 119 (60%) agreed to take prophylactic oseltamivir
- 15 (4%) poultry workers reported symptoms and were evaluated and tested
  - No cases of avian influenza
- 437 poultry workers for whom primary language was known

– 363 English; 62 Karen; 12 Spanish speakers

#### Language other than English

- Interpreter needed for 21 (6%) poultry workers, 11 Karen and 10 Spanish speaking
- Contacted either by interpreter through a language line or by native speakers working at MDH
- Health information for poultry personnel, including PPE recommendations, translated into Spanish and Karen

#### Health Information for People in Contact with Avian Influenza H5N2 Infected Flocks

#### The risk of getting sick from the virus if you have cared for infected birds is very low.

- No one has gotten sick with this strain of avian influenza in Minnesota or in the U.S.
- · However, similar highly pathogenic H5 viruses have made people sick in other parts of the world.

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 တဉ်စေဉ်လန်<u>ာက ထိန်ထီတိုးကတ်စေါယ်၊ စာအထီးကို ထိုာ်လန်အားတဖ်န်နန်း၊ စီးအမြေးလားတီနိုင်နိုင်နောက် စာစော်နန်</u> လီး.

> Información de salud para personas que trabajan con aves infectadas con gripe aviar

El riesgo de contraer la gripe aviar si ha tomado precauciones con las aves infectadas es muy bajo.

- Nadie se ha enfermado con la cepa H5N2 de gripe aviar en Minnesota o en los Estados Unidos.
- Sin embargo, personas en otras partes del mundo se han enfermado a causa de virus similares de gripe aviar altamente patógenos.

A pesar de que el riesgo es bajo, hay algunas medidas que puede tomar para mantenerse sano.

 Use un equipo de protección personal (Personal Protective Equipment, PPE) cuando trabaje con aves que hayan resultado positivas o negativas a las pruebas de gripe aviar. El equipo que use debe incluir gafas o anteojos de seguridad, una máscara para el rostro, guantes, overol y botas.

#### **Compliance with recommended PPE**

<b>PPE Component</b>	Total (%) n = 379
Coveralls	263 (69.9)
Gloves	291 (77.4)
Boots	297 (79.0)
Eye protection	186 (49.1)
Mask	254 (67.6)

- 194 (51%) did not adhere to wearing all recommended PPE components
- Poorest compliance with wearing eye protection
- As outbreak progressed, compliance improved

#### Two outbreaks among responders

- Campylobacteriosis
  - 5 cases among responders on farms
  - 2 hospitalized, 1 ED visit
  - Recommended clean trailer for resting and eating
- Influenza B
  - 30 cases identified in 2 MN EOCs
  - Recommended immediate evaluation, Tamiflu, and isolation for symptomatic responders
  - Flu vaccination prior to deployment



#### Successes and challenges

- Great cooperation from the poultry industry and poultry workers
  - <1% lost to follow up during monitoring
  - Company Occ Health willing to facilitate and pay for prophylaxis
- ED's, urgent care and clinics willing to assess ill poultry workers and responders
- Materials and innovations shared regionally and nationally

- State and USDA responders had been asked to self-monitor – bad idea
  - Transient responder population
  - Rotation every 3 weeks
  - Unclear when or how to report illness
- USDA depopulation and C/D contractors
  - Rapid and large deployment
  - No designated point of contact to address health issues

#### What we are planning for 2022

- Monitoring of poultry personnel *and* Board of Animal Health, MN Department of Agriculture and MN USDA responders
- Increased emphasis on PPE, N95 or PAPR usage, for everyone in the barns, including producers
- Poultry company employee and state/federal responder contact lists prepared in advance and provided to MDH as needed for test-positive premises
- RedCap database and automated email-based daily monitoring
- Biggest lesson from 2015 to apply to 2022: There is a clear need for public health to be a full partner in the response to HPAI. In Minnesota, we are.

#### Thank you!

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- Poultry industry
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- MDH Influenza Unit
- MDH Public Health Laboratory

